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WD # 404205

Client Ref. No. H16-17016

Clean Version of Pending Claims**TWO-TIER WIRELESS SYSTEM FOR DISTRIBUTED CONTROL/COMMUNICATION**Applicant: Jeff Kriz
Serial No.: 08/941,963

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1. (Twice Amended) A system comprising:
 - a plurality of devices, each device coupled to a low power transceiver that transmits over a short range, and receives information, wherein at least one of the devices is selected from the group consisting of sensors, actuators, and controllers;
 - a plurality of router nodes, each router node having a transceiver capable of receiving device information from one or more proximate wireless devices and capable of wireless communication at a higher power level with other router nodes; and
 - a controller coupled to at least one router node for receiving device information, wherein the router nodes transmit device information either to the controller or to another router for further transmission of the device information.
 2. The system of claim 1 wherein the low power transceiver has a lower data bandwidth capability than the bandwidth of the communication between router nodes at the higher power level.
 3. (Once Amended) The system of claim 1 wherein at least one of the devices further comprise a battery for supplying power to the low power transceiver.
 5. The system of claim 1 wherein one of the routers is hardwired to a device which generates high bandwidth information.
 6. The system of claim 1 wherein the controller is coupled between a telephone wiring network in a structure and external telephone lines.

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7. The system of claim 6 and wherein the controller is capable of intercepting touch tones transmitted on the telephone wiring network in the structure and interpreting them as controller commands.
8. The system of claim 7 wherein the controller transmits information via the routers to devices in accordance with the touch tone commands.
9. The system of claim 1 wherein the controller further comprises circuitry to receive transmissions representative of controller commands from a wireless telephone.
10. (Twice Amended) A monitoring system comprising:
 - a plurality of devices, each device having a low power battery operated transceiver that communicates information over a short range, provided by the device, wherein at least one of the devices is selected from the group consisting of sensors, actuators, and controllers;
 - a router having a transceiver that receives communications from at least one selected device and transmits further communications via a higher power transceiver to other routers; and
 - a controller communicatively coupled to a router.
11. The system of claim 10 wherein the low power transceiver has a lower data bandwidth capability than the bandwidth of the communication between routers.
13. The system of claim 10 wherein one of the routers is hardwired to a device which generates high bandwidth information.
14. The system of claim 10 wherein the controller is coupled between a telephone wiring network in a structure and external telephone lines.

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15. The system of claim 14 and wherein the controller is capable of intercepting touch tones transmitted on the telephone wiring network in the structure and interpreting them as controller commands.
16. The system of claim 15 wherein the controller transmits information via the routers to the device in accordance with the touch tone commands.
17. The system of claim 10 wherein the controller further comprises circuitry to receive transmissions representative of controller commands from a wireless telephone.
26. A network of router nodes communicatively coupled to a central controller of a security monitoring system, the network comprising:
 - a first router node hardwired into the central controller;
 - a second router node having a first receiver for receiving low power transmissions of physical condition related information from a plurality of devices located proximate the second router node, a second receiver for receiving high bandwidth transmissions from other routers in the system, and a first transmitter coupled to the first and second receivers that transmits information from the plurality of devices at a relatively high power to the first router node.
27. The network of claim 26 and further comprising a plurality of further router nodes located proximate to a further plurality of devices transmitting at low power.
28. The network of claim 27 wherein at least some of the plurality of further router nodes transmit information from the proximate devices to the first router node.
30. (Once Amended) A router node in a physical condition monitoring system, the router node comprising:

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a first transceiver that receives low power transmissions of information from a plurality of devices located proximate the router node, wherein at least one of the devices is selected from the group consisting of sensors, actuators, and controllers; and

a second transceiver that receives high bandwidth transmissions from other routers in the system, wherein the second transceiver further transmits information from the plurality of devices at a higher power level than the received low power transmissions.

31. The router node of claim 30 wherein the second transceiver operates at an unlicensed spread spectrum frequency range.

32. The router node of claim 31 wherein the frequency range is selected from the group consisting of 900 MHZ, 2.4 GHz, and 5.8 GHz.

33. The router node of claim 30 and further comprising a device which is hardwired directly to the router node for direct communication of high bandwidth information.

34. The router node of claim 33, wherein the hardwired device comprises a video camera.

35. The router node of claim 34, wherein the router node transmits high bandwidth compressed video to other routers at the higher power level.

39. (Once Amended) A system comprising:

a plurality of means for transmitting information at a low power and receiving information;

a plurality of means for being located proximate to and receiving device information from one or more of the means for transmitting information at a lower power and for wireless communication at a higher power level with other such means for being located proximate to and receiving device information; and

means for controlling the plurality of means for being located proximate to and receiving device information.